

REMARKS

Claims 9 and 10 have been rejected under 35 USC 102(e) as anticipated by Kaplan. The rejection is respectfully traversed.

The invention relates to a polarization-multiplex system where two modulated optical signals with the same carrier frequency (from the same laser) but two different (orthogonal) polarizations are combined and transmitted via an optical fiber, as a polarization diversity multiplex signal. According to the invention the (first) carrier signal of a first modulated optical signal, and the second carrier of the second modulated optical signal have a phase difference of 90 degrees.

Kaplan, on the other hand, discloses a phase modulation in combination with polarization multiplex. According to Kaplan, with reference to Figure 4, the carrier signal is split and fed to an upper and a lower part of the quadrature modulator. The upper carrier signal is then split again and fed into two branches of the upper quadrature modulator, and a 90° phase shifter is inserted in one of the branches. Therefore, two carrier signals having the same first polarization are generated with a 90° phase difference. This is done to generate a quadrature (4-phase) modulated signal. The same is done in the lower part of the quadrature modulator.

Contrary to Kaplan, the claimed invention requires a first carrier signal of a first optical data signal and a second carrier signal of an orthogonal second optical data signal. The first carrier signals of the first optical data signal and the carrier signal of the orthogonal second optical data signal are 90° phase shifted. That is, the two carrier signals have different polarizations and a phase difference of 90°. Indeed, the claimed invention would not operate if a four phase (quadrature) modulation is used because

modulated optical signals with the same phases are generated in the upper and lower part of the quadrature modulator.

Claims 9 and 10 are therefore patentably distinct over the applied prior art.

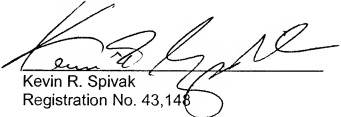
The Examiner notes that claims 11-5 have been objected to as dependent upon a rejected base claim, but otherwise allowable if rewritten into proper independent form. Additionally, the Examiner states that claims 16-19 are allowable.

In the event any further matters requiring attention are noted by Examiner, or in the event that prosecution of this application can otherwise be advanced thereby, a telephone call to Applicants' undersigned representative at the number shown below is invited.

Further, Applicants hereby petition for the Commissioner to charge any additional fees or any underpayment of fees which may be required for this Amendment and which may be required to maintain the pendency of this case at any time during prosecution, or to credit any overpayments, to Deposit Account No. 04-1061, referencing Attorney Docket No. 39090-64.

Respectfully submitted,

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